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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/819,071	10/09/2001	Joerg Giesler	658/49678CO	7493

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EXAMINER

SOOHOO, TONY GLEN

ART UNIT	PAPER NUMBER
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1723

DATE MAILED: 09/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/819,071	Applicant(s) GIESLER ET AL.	
	Examiner Tony G. Soohoo	Art Unit 1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8-14 and 16-25 is/are pending in the application.
- 4a) Of the above claim(s) 10-12, 14, 16-17, 19-21, 24-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 6, 8, 9, 18 and 23 is/are rejected.
- 7) ☒ Claim(s) 13 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Election/Restrictions

1. Claims 10, -12, 14, 16-17, 19-21, 24-25 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Species, there being no allowable generic or linking claim. Election was made **without** traverse as noted in the office action of 3-10-2004.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 5-6, and 8-9, 18, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 1579001 (DE '001 , also FR 1494681 , same patent family) in view of Burpulis et al 3865354.

The DE '001 teaches a system comprising a gear pump 27, 28, and a screw type extruder for delivering elastomeric material, comprising a screw 4, a screw casing 1,3, the screw-type extruder being arranged in front of the gear pump 27, 28, viewed in the delivery of direction of the pumping medium whereby the extruder is located upstream of the gear pump, characterized in that the screw casing 1, 3 has a conical part as seen in the forward portion of the cylindrical casing from the hopper 5 in the direction of the flow of material to the gear pumps, and the screw 4 has at least one tapering in the area of the conical pad of the housing, and that the screw 4 is axially displaceable in the screw casing 1,3 which may produce a controlled feeding of pressure of fed material

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into the gear pump. Note that the casing as seen in figure 1 and 2 has a cylindrical portion about the hopper 5 opening, between the wall of the conical wall 3 and the end of the casing at 8,9.

The DE '001 reference discloses all of the recited subject matter as defined within the scope of the claims with the exception of having the cylindrical section continue downstream of the feed hopper opening to the tapering area.

The Burpulis (et al) reference discloses that an extruder screw having an axial reciprocal pressure control assembly 13, 14, 15 and a screw having a cylindrical section 3 within a cylindrical barrel section and a tapering section 4 and tapering screw 32. Burpulis utilizes heated in zones 1-3 downstream from the feed opening 6 and prior a conical part of the barrel 4 within the cylindrical section. The provision of the cylindrical heated section provides an effective manner to further melt the material to a working temperature prior to introduction to the converging conical section 4.

Accordingly, in view of the teaching of the Burpulis reference it is deemed that it would have been obvious to one of ordinary skill in the art to provide for the barrel and screw of the DE '001 reference, a heated cylindrical barrel and screw portion so that material may be more effectively melted to the proper temperature before further working of the material in the conical section and the gear pump.

With regards to claim 2 note that the taper is on the gear-pump-side end of the screw extruder 4 as opposed to the hopper end 5.

With regards to claim 3 not that the taper of the screw increased as viewed in the delivery direction of the material so that it tapers to a smaller section. With regards to

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claim 7 note a cylindrical section at the nozzle 2, or the cylindrical section adjacent at the hopper 8, or the piston section 6. With regards to claim 15 note that heat and pressure processing of plastics material provides a transport and processing of an elastomeric material With regards to claim 23, note that the control of the exit gap would also control and vary and control the pressure energy as it leaves the extruder and enters the gear pump.

With regards to claims 5-6, and 8-9, DE '001 as modified above, discloses all of the recited subject matter as defined within the scope of the claims with the exception of the tangential plane of the screw in the area of the tapering angle is 2-10 or preferably 8., the screw length is less than 5 or is 3 times the diameter of the screw; length of taper pad to conical part being 1:2-1:5 or approximately 1:4*, or the cone length is less than the screw.

It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). A change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955).

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over DE 1579001 (DE '001, also FR 1494681, same patent family) in view of Burpulis et al 3865354, as applied to claim 1, and in further view of Tadmor 5356208 .

DE '001 discloses all of the recited subject matter as defined within the scope of the claims with the exception of a double helix" screw, twin flight screw. The reference

to Tadmor shows that a screw element for working plastic material may have plural thread flights may be provides upon the screw so as to provide further processing by the screw element. Accordingly, it is deemed that it would have been obvious to one of ordinary skill in the art to provide a duplication of the flight helix of the DE '001 to include a second helix as shown by the reference to Tadmor whereby an additional helix may provide additional working of material by the additional flight is a mere duplication of parts. It has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Allowable Subject Matter

5. Claims 13 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

6. In response to applicant's argument that the reference fails to show certain features of applicant's invention, i.e., the casing is cylindrical down stream of a feed opening has been addressed by the rejection above.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Applicant has presented additional language to the particular positioning and limitation of the cylindrical section of the barrel casing. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

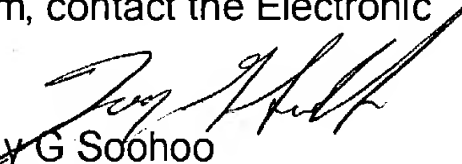
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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony G. Soohoo whose telephone number is (571) 272 1147. The examiner can normally be reached on 7:00 AM - 5:00 PM, Tues. - Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tony G Soohoo
Primary Examiner
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